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ABSTRACT

The ideal of general education in American universities has always been elusive. At the moment, a combination of forces would seem to be pushing both students and universities toward a still more narrowly conceived and utilitarian curriculum. This situation may be temporary, and concern about its effects on higher education is no doubt exaggerated in the press and then echoed in conversations on campus; but the sense of constraint felt by students is nonetheless real. The university assumes that college is a place where students discover what they can do well, and where they are encouraged to define their talents and to develop them in a concentrated way; it also assumes that college is where students are led to a certain self-consciousness about that discovery, and come to raise questions about the relation their particular talents bear to other forms of knowledge and action. Finally, the university would like to see more courses that address themselves, both practically and reflectively, to student fluency and writing. The committee's recommendations for general education in the university are summarized and argued for at length in this report. (Author/MSE)

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REPORT OF

COMMITTEE ON GENERAL EDUCATION

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HE 008 742

Cornell University

College of Arts and Sciences

January, 1977

CORNELL UNIVERSITY
College of Arts and Sciences
Ithaca, New York

Office of the Dean

February 17, 1977

MEMORANDUM

To: Faculty and Students, College of Arts and Sciences

From: Harry Levin, Dean

Subject: The Report on General Education

The concern with general education is ultimately a concern with the fundamental questions we must ask about the nature and purposes of a college of arts and sciences. The goals of an undergraduate collegiate education are simple to state in general terms but difficult to agree on when we try to be precise. In broadest terms the goal is mundane: to assist our students to become educated people. But there are probably thousands of definitions, most of them reasonable, of what we mean by "educated people." The Committee on General Education defined their vision of education in the following way: "We assume that college is a place where students discover what they can do well and where they are encouraged to find their talents and to develop them in a concentrated way. We also assume that college is where students are led to a certain selfconsciousness about that discovery and come to raise questions about the relation their particular talents bear to other forms of knowledge and action" (p. 3). Later the report says, "In our discussions we frequently found ourselves coming back to this question, sometimes wishing to stress the continuities, historical or conceptual, among different ways of knowing; at other times insisting on the contingent overlappings and conflicts among fields. That such considerations

arise, and that they provoke both clarifications and a certain residual puzzlement about just what constitutes knowledge, seem to us among the more important things we have to say to undergraduates" (p. 6). In other words, the committee described the educated person as one who knows some areas of knowledge well, usually areas that will be projected into his or her further education or work. Additionally, educated persons have a range of intellectual inquiries which they see in relationship to each other and in relationship to the core of their interests. The committee implies that it is not only the transmission of knowledge but, in their terms, "a certain puzzlement" which defines the intellectual life of the educated person. From my own point of view, I have conceptions of the educated person. He is familiar with those thinkers who have shaped our civilization and our minds. He knows that learning is hard; the satisfactions come from the achievements. There is no way to sugar-coat serious learning and teaching.

Education is a life-long process. We are particularly concerned about the collegiate period because in these four years is concentrated the most significant and the most dense period of education. I think of the educated person as having certain attitudes toward knowledge, toward himself, and toward the world. First, the educated person maintains an attitude of curiosity about many things. In fact, this curiosity, the desire to know, is a powerful motivator for learning both during college and later in life. The confidence that one can continue to learn and can educate oneself is important to my definition. Fundamentally, an educated person is someone who is curious about himself and about the world and is prepared to satisfy that curiosity by study, usually on his own, throughout his or her life.

Also, the educated person approaches himself, other people, and the world with a set of attitudes which, for want of a better term, we call a humane point of view. I can define these attitudes only in intuitive ways, but the definition revolves around a concern with the human condition and respect for the integrity of people. I do not think such attitudes can be taught or learned directly. Rather, they are consequences of the kinds of education that are described in the General Education Report.

I do not think that Cornell or any other college or university has done an adequate job in educating students. We are not alone in asking basic questions about our educational program.

I agree with the Committee that the attentions of the College have usually been more narrowly focused than on the general education of students. The Report lists a number of recommendations which I think will redress our shortcomings. There is general agreement in higher education that the laissez-faire, free elective system of course choice has not produced educated people. The General Education Report echoes this concern, although it does not recommend a common core curriculum for all students, as seems to be the current solution in other universities. We are fortunate that the College has maintained distribution requirements and language requirements so that they do not have to be put into place anew. The Report actually does not constrain the choices of curriculum in any serious way. In every student's program, although there is some pre-planning and modification of totally free choice, there is enough flexibility for a student not to be bound by specific course requirements. The pendulum of higher education is in my view

rapidly swinging away from completely free electives, and I think the suggested point of the pendulum's rest in Cornell's program is still toward the freedom-of-choice end of the arc.

There are many excuses why the ideal of the educated person has been subverted. The media, the quality of mass culture, television, the lessening standards of the public schools may all contribute, but we profit more by accepting our students as we find them and working from that point. In fact, I optimistically believe that as college education changes we will influence the secondary schools. Before long the values of the university will be reflected in high school curricula so that our students may come to the university with some of the training that we now must make up during their early years in college.

It is true that the conditions of the economy and the high cost of education have pushed students prematurely toward professionalism, but the blame is not all theirs. I believe with the General Education Committee that the pressures for early specialization come not only from the post-collegiate goals of our students but from the College itself. We are adept at introducing students to various disciplines and so giving them professional orientations much too early in their college careers. If the fault is partly ours, so is the solution.

A talented and dedicated faculty is the most important element for change. There is a tension between the research and basic teaching purposes of a major university, but I must agree that the new kind of education we seek can take place only in a university devoted both to the discovery and to the dissemination of knowledge. The best instructors for educated people are faculty members who are themselves intellectually motivated, who take their

pride and satisfaction from discovery and who, by example and instruction, can communicate the excitement of knowledge to their students.

I enthusiastically endorse all of the recommendations of the Committee on General Education. I shall take up only a few. A Board on General Education is not another bureaucratic apparatus imposed on an already over-bureaucratized educational institution. It is an office necessary to carry out new activities and to sustain attention on the achievement of new goals. It will have as its functions: defining precisely what is meant by a general education, describing general education courses, and searching for such courses among the existing curricula of the university. I suspect there are not many.

The most difficult and sensitive part of their task is to guard against the possibility that with time general education courses will be reduced to dilettantism. Further, they will peruse students' programs to make sure that they are not narrow. Since these courses are not easy to develop or teach, the Board will arrange for the needed time and resources. Eventually, if the proper courses are constructed and are as successful as we hope, they will be the primary means used by students to fulfill their distribution requirements.

The General Education Board will be concerned with the content of new courses. Their activities should be coordinated with those of the Board on the Improvement of Instruction. Together, we are more certain that both the content and the nature of the courses' organization and presentation will be of the highest quality.

Extending some of the requirements throughout the four years rather than jamming them into the early part of the undergraduate program is an excellent idea. This will help subject matter to be dealt with anew and will permit us to pay particular attention to the writing skills of students so that another recommendation of the Committee -- that concern with writing extend throughout the undergraduate years -- will be fulfilled.

It is fashionable to be troubled about the inadequacy of students' writing. The ability to write well presupposes many of the other mental skills that a general education program should bring about. Writing well is not simply putting words on paper. It has to do with thinking, organizing one's thoughts, expressing these thoughts in ways that are comprehensible to others, and with that felicity of expression which comes from intensive instruction in writing as well as exposure to authors and ideas. At one time, writing and rhetoric were combined to serve these purposes. The College has made a start in upgrading its programs in writing and in fact has taken some leadership in this endeavor among American universities, but there is still much to be done.

In addition to the usual literacy of writing and reading well, I think every student should have at least an introduction to mathematical literacy; that is, familiarity with mathematical thinking, with computers, with basic issues in mathematics. I would have preferred that the Committee on General Education recommend such literacy as part of the undergraduate program. However, understandably, they preferred to wait for appropriate courses to be developed and to leave to the Board on General Education the decision

about how widely the mathematics courses should be required of students. I might add that many of us are aware that the development of such courses, which would be interesting and effective for people with little formal training in mathematics or in the sciences, is particularly difficult and challenging to put into place.

An ideal collegiate experience does not depend solely on courses, general or otherwise, laboratories, tutorials, research, etc. We must pay more attention to the so-called "hidden curriculum." The General Education Committee puts it this way: "We believe that a university should provide its undergraduates with a number of different kinds of opportunities and obligations to extend their minds and sensibilities; with concerts and films and leisure for reading and conversation as well as with specific courses and programs of study. We would draw attention to questions of atmosphere as well: to the way students are housed and to the aesthetic qualities of the environment, to the way classes are conducted and papers and examinations graded, to the pace of the school year as it is set by the present calendar," (p. 4). Students learn from each other and from informal discussions as well as from the formal programs of the university. Although the committee does not address itself to these issues, the university must consider programs that make possible such ambiance for informal learning by organizing residences in ways conducive to education and by creating tutorials and other discussions which tie together the out-of-class and the in-class interests of students and faculty. When we realize that Cornell will compete for an ever smaller number of qualified students, I believe we cannot do otherwise than attempt to create an extra-

ordinarily attractive undergraduate life which will appeal to the smaller number of students who will be available to go to college.

How do we put the recommendations of the General Education Committee into effect? The slowness with which universities change their programs and their curricula is legendary. I doubt that the recommended changes will all be put into operation in a brief time. Rather, I suggest that we set up opportunities for intensive discussion of the recommendations and then for modes of implementing them. Within several weeks I shall organize a "town meeting" where students and faculty can question the Committee on General Education about their report and some of the thinking that went into the recommendations. A large number of working papers were distilled into the report. In April, a group of students are organizing a weekend of discussion having to do with liberal education. The details will be announced. There will be outside speakers, panels of faculty and students, and opportunities for discussion and reports.

The College has formal procedures for recommending and adopting changes. Each of the recommendations will be discussed first in the College's Educational Policy Committee. On the basis of these discussions, the agenda items will be presented to the College's faculty for their discussion, followed by either acceptance or revision or rejection. The order of these items will be the same as appears in the Report. This is not a rapid process. I expect that we will discuss the recommendations for at least a year before they are all either voted up or down.

A general education program, even one as modest as we are considering,

is costly. For one, the Committee urges departments to contribute a substantial amount of their teaching time to general education. In some cases departments are already doing so; in other cases departments will have to add or substitute courses for other parts of their undergraduate program. Sometimes departments will have resources for change, and in other cases they will have to be given additional means to carry out the new programs. These additional resources will be available in several ways. One is the substitution, as I have said, of new activities for old ones. Where new faculty or assistants must be available, support will probably have to come from additional university appropriations as well as from outside the existing university budget, that is, from foundation grants and other gifts and endowments.

Finally, I strongly believe that such definition of the purposes of the College is essential, not only for the future of the College, but also for the future of the University. Not that Cornell will cease to exist without changes, but if we are to improve as a major center for broadly-based learning, changes are essential. At the end, I think the vision of undergraduate education in the General Education Report is the most practical education today. It is an education for diversity, providing our students with the skills and attitudes with which to face a socially and economically changing world.

HL:mbd

DISSENT

by Carl Sagan

Due to my leave of absence from Cornell for the Viking Mars missions I was unable to participate very actively in the deliberations of the Committee on General Education during the fall of 1976. I believe that the general direction of the Committee's recommendations are excellent; but I think the Report does not go far enough:

1. The Point of a General Education. The Report provides an inadequate discussion of the justification for a general education, especially in a time when many people hold vocational training to be the objective of four years in college. Success in many relatively narrow fields as well as significant contributions to society as a whole require an aptitude for interdisciplinary studies and a broad knowledge of things human. For many people college represents the last opportunity to experience an important new influence on their intellectual interests and life styles. Our lives are enriched if we appreciate the plastic and performing arts, the physical and biological sciences, music, psychology and anthropology, politics and economics, Eastern and Western philosophy, rhetoric and logic, and mathematics, to take a few not entirely random examples. The function of a general education is simultaneously to make the student far more effective in the pursuit of his career goals and to make the non-vocational part of his intellectual life far more enriched and rewarding. Unlike most other animals, we humans are able to tap the insights of our ancestors. Without a general education we are isolated from the long cultural tradition which has made us human.

2. Elective vs. Required Courses in the General Education Curriculum. I entered college with a very clear idea of career goals and a desire to

begin immediately in vocational education. But the college (University of Chicago, 1951) had other ideas. It argued with some force that those applying for admission were relatively uneducated, and that the faculty were by and large better educated. This seems to me to be an important distinction, without which collegiate education would make little sense. For a student to choose his electives properly he must already understand the subject matter of the elective. When I entered college not only had I not studied but I had never heard of cultural anthropology, economic theory, enzyme chemistry, Freudian psychoanalysis, the second law of thermodynamics, binary arithmetic, comparative linguistics, Sophocles, Dostoevsky, William Blake and all music composed before the time of J.S. Bach. (This is, incidentally, by no means an exhaustive list.) I am sure most students entering Cornell will have less severe gaps in their general education. I am also sure that, left to my own devices, I would not have studied many of these subjects. I believe many Cornell students may be in the same situation, and will be educationally short-changed if they themselves select their general education electives. I would far prefer to see a common core curriculum in general education which must be taken by all students in the College of Arts and Sciences unless they can demonstrate prior competence both in subject matter and method. Failing this I would urge that the list of courses appropriate to general education be very carefully devised and categorized so as to guarantee that no students graduate from Cornell without making contact with the principal intellectual themes which have shaped our civilization.

3. Placement Examinations. Many Cornell students arrive on campus with an adequate to excellent background in certain subjects. With mandatory general education, students must pursue both breadth and depth. There should be a regular mechanism for students to demonstrate prior competence in general education courses and, if successful, to be excused from such courses. In this way many students will be able to demonstrate abilities in a wide range of subjects without having to take formal courses. If a student wishes to spend time during a summer preparing for an examination in a given field,

he or she should certainly have the opportunity to be examined on that subject. Such a scheme, of course, requires that several dozen new examinations be devised and graded by the faculty each year, but that seems a small price to pay. On this point, I have difficulty understanding the Report's discussion on foreign languages. Should not someone who exhibits on arrival at Cornell the same competence in, say, French, as the average of Cornell students who have taken an introductory course in French be excused from the requirement? Should not foreign students already fluent in their native language and in English be excused from language requirements?

4. Courses in Thinking. The report urges that new courses be concerned significantly with "the general ability to write and think", surely an exemplary objective. By and large Cornell students are very poorly prepared in constructive criticism of new ideas, in tough-minded skepticism, and in what used to be called logic and rhetoric. The widespread acceptance of mysticism and occult nonsense by college students is not very encouraging either for their understanding of much course material or for their subsequent creative contributions to their chosen fields. A citizenry used to asking tough questions of its elected officials and to challenging traditional assumptions is fulfilling a vital role in the democratic process. But it is difficult to take stands without adequate training. Where does a Cornell student study the usual logical fallacies so common in politics and everyday life -- the ad hominem, the excluded middle, the straw man, post hoc ergo propter hoc, analogical errors and so on? Where does he gain systematic practice in oral argument and effective debate, and in the presentation of unpopular views? These are essential tools for living in our modern society; I would put them on an exact par with the ability to write and would urge a comparable stress on these subjects (which might be called "thinking") in freshman seminars and interdepartmental curriculum committees.

5. Science and Technology. We live in a society whose character is powerfully determined by science and technology; but the vast bulk of the populace, including governmental leaders, has a very poor understanding of what science and technology are about. To be more effective citizens and

decision-makers, to decrease the alienation which many feel toward our civilization, and to enjoy the profound pleasures of understanding something of how the universe works, the general education student should devote significant time to the study of science and technology. The awakening of new intellectual perspectives and the sense of shaking the foundations of conventional assumption which the study of science provides is at least equal to that so well described in Section 4 of the Report on the value of foreign tongues. The representative curricula indicated in Appendix B of the Report make no distinction between the physical and biological sciences. I am astonished that in a representative course program, English and French literature majors might make no study whatever of the physical sciences, while physics and government majors might make no contact with the biological sciences. Students in all representative curricula make not even glancing contact with engineering and technology. I believe that no one should graduate from the College of Arts and Sciences at Cornell without having made some study of these subjects, even if it is a special three or four term introduction to the physical and biological sciences.

6. History of Western Civilization. I think it is axiomatic that no one should graduate from Cornell without taking a course in the history of Western civilization.

7. Computer-assisted Education. There are new technologies now available which can complement and in some cases replace traditional classroom instruction. The most effective of these is computer-assisted instruction. At some schools such as Dartmouth College, computer terminals are scattered all over the campus and in the residence halls, and provide access to hundreds of instructional programs on the entire range of curricula. The computer is very clear and very patient and the student has no fear of appearing stupid. Disadvantaged students in particular can benefit from such a program. Computer-assisted instruction should be a major focus of general education at Cornell.

8. Foreign Languages. I find the arguments in Section 4 of the Report the best possible case that could be made for mandatory study of foreign languages. However, considering the other courses ("Thinking", "Science and Technology", and "History of Western Civilization") listed above, which I think are even more urgently required, I reluctantly conclude that the mandatory foreign language requirement should be dropped. (I also would like to see substantially more discussion of the exception mentioned in Section 4 that languages "should be required of all students except those having language-learning aptitude well below the average." Is the principle that those who have the most to learn in a given subject should have the fewest requirements in that subject? Is this a principle of general applicability?)

There is a continuum of possible positions on general education. The present position of the Committee on General Education represents a significant step forward for Cornell but does not represent nearly the dedication to general education that I personally believe every university should adopt and indeed has an obligation to provide to its students. However, any significant improvement in general education at Cornell requires money. Because general education courses of the sort set out in the Committee's Report are so rare at Cornell, their development will require significant investments of faculty time and in some cases re-education of the faculty. If faculty are to be excused from some assignments to institute new general education courses, replacements must be found and their salaries paid. Additions to the faculty in general education, and general education teaching assistants cost money. Computer-assisted instruction costs money. A good measure of Cornell's dedication to general education will be the funds made available for this purpose. It is conceivable that foundations or, more likely, individual donors might wish to contribute to general education at Cornell, and a special fund to support general education might be created to be administered by the Dean of the College of Arts and Sciences.

COMMITTEE ON GENERAL EDUCATION

REPORT

to

Harry Levin

Dean, College of Arts and Sciences

January, 1977

David Connor
Wolfgang Fuchs
Neil Hertz
Charles Hockett
W. R. Johnson
Theodore Lowi, Chairman
David Mermin
Edward Morris
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Ulric Neisser
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Carl Sagan
Sandra Siegel
C. Evan Stewart
L. Pearce Williams

I. INTRODUCTION

The ideal of general education in American universities has always been elusive. Even when given subtle and resonant expression, it has proved difficult to embody for very long in a working curriculum. The aims and aptitudes of our incoming classes change, slowly but discernibly; so do the professional interests of the faculty; and these factors, together with the university's vulnerable situation within the national economy, combine to determine the possibility of maintaining a genuinely liberal undergraduate program.

At the moment, a combination of forces would seem to be pushing both students and universities toward a still more narrowly conceived and utilitarian curriculum. Our students may arrive on campus as bright and as intellectually curious as ever, but they are, at least for the present, clearly more concerned than they used to be about what will become of them after college. The economic recession, the anxieties of parents hard-pressed to pay their children's tuition and possibly disaffected with the higher learning, the filtering down of corporate values and practices -- these are reflected in a noticeably increased demand for vocational training. This situation may be temporary, and concern about its effects on higher education is no doubt exaggerated in the press and then echoed in conversations on campus; but the sense of constraint felt by our students is nonetheless real, and we were obliged to take account of it in our discussions. Students cannot withstand this kind of pressure unless the College

itself can withstand it and can continue to provide a structure and an atmosphere within which its undergraduates can arrive at a thoughtful sense of the world and of their own abilities.

It is easy (and even somewhat pleasant, in a doleful way) to locate the forces at work in society at large that impinge on the university and act as constraints on the leisure and curiosity of our students. It is more puzzling to come up against obstacles to liberal education inherent in the structure of the university itself, and associated with some of its most valuable activities. If one purpose of a university is to educate students, another is to transmit and extend an accumulating body of knowledge. These two purposes are inevitably in tension with each other, even if they are not always at odds. In some circumstances, most clearly in the training of advanced graduate students, the two purposes almost coalesce; in others -- for example, in the teaching of writing to freshmen -- a faculty commitment to extending the knowledge of a particular field might be at cross-purposes with the wish to address and attract students who have not yet declared an interest in that field, perhaps not yet even realized that such a field exists. This dual demand on a faculty member's skills is reflected more clearly, and more cumbersomely, in the dual mission of departments. Universities are organized into departments because the pursuit of knowledge is best carried out by people grouped into relatively autonomous disciplines. But departments also provide the framework within which most undergraduate education takes place, and it is not at all

clear that they are as adaptable to this task as they are to promoting the work of a particular discipline. Indeed, our observations suggest that departments are considerably less inventive in addressing themselves to the problems of general education than they are in recruiting and training concentrators -- graduate and undergraduate -- in their particular line of work. Our proposal to create a Board on General Education is an attempt to redress this balance somewhat, not by deploring that departments function as they do but by setting up a countervailing force.

Such are the pressures from within and outside the university that must be counteracted, we believe, in the name of "general education." We did not set out to define what we meant by that term, but we did discover, in the course of a year's discussions, that we were working on the basis of certain assumptions. It may be useful to state them here.

We assumed that college is a place where students discover what they can do well, and where they are encouraged to define their talents and to develop them in a concentrated way. We also assumed that college is where students are led to a certain self-consciousness about that discovery, and come to raise questions about the relation their particular talents bear to other forms of knowledge and action. As our discussions turned round these two interinvolved yet distinct aims of undergraduate education, we came to see how easy it was to oversimplify the relations between them and to think of them in terms of oppositions like narrow (and deep) versus broad (and superficial) or specialized (pre-professional) education in a

major field versus general (liberal) education in everything else. We also noticed how readily our current curriculum lends itself to such a misrepresentation by tacitly encouraging the early "satisfaction" of distribution requirements as a preliminary to the more "serious" work of the major. We propose an alternative set of College requirements as well as the creation of certain new courses in the hope of making the curriculum reflect a more appropriate notion of general education.

We do not propose a required core curriculum or a specific set of readings; most of the members of our committee found themselves out of sympathy with any monolithic notion of what a liberally educated person should know. Rather, we believe that a university should provide its undergraduates with a number of different kinds of opportunities and obligations to extend their minds and sensibilities: with concerts and films and leisure for reading and conversation as well as with specific courses and programs of study. We would draw attention to questions of atmosphere as well: to the way students are housed and to the aesthetic qualities of the environment, to the way classes are conducted and papers and examinations graded, to the pace of the school year as it is set by the present calendar. We would insist that students naturally vary in what they need to know and in how they go about learning what they learn. But these are matters that are hard to monitor and legislate; the Committee found it more practical to make proposals concerned with the general shape of the undergraduate curriculum and with the nature of the courses we thought would best minister to a

student's education.

In one sense, there is no such thing as a "general education course." A course must be judged to form part of a student's general education not on the basis of the material it presents or the level of technical sophistication with which it engages the subject, but rather on the quality of attention it exacts from the student. Given a particular student with a particular set of interests, any course might (although it may not necessarily) serve as an occasion for "general education": a narrowly focussed and highly technical science course, for example, if it were taken by someone on his or her way to law school. Here we would stress the importance of informed faculty advisers in helping students put together programs of study that will be at once challenging and diverse.

But we would also acknowledge the need for more courses which explicitly address themselves to this matter of the quality of attention. Here, too, a variety of possibilities suggest themselves. A department could offer an advanced course taught so as to encourage its majors to reflect on the implications of a very limited and sophisticated set of intellectual operations. Or a broadly speculative course, taking up the relations among disciplines, could be offered, not as an introduction to freshmen, but as a more informed overview, addressed to seniors who already know something about one or another of the disciplines involved. We would particularly urge our colleagues to devise courses of this latter sort, offered within a department or across departmental lines, but in either case concerned with

exploring the relations among disciplines. In our discussions we frequently found ourselves coming back to this question, sometimes wishing to stress the continuities, historical or conceptual, among different ways of knowing, at other times insisting on the contingent overlappings and conflicts among fields. That such considerations arise, and that they provoke both clarifications and a certain residual puzzlement about just what constitutes knowledge, seemed to us among the more important things we have to say to undergraduates.

One final assumption, about the question of literacy. We are accustomed these days to complaints about how badly our students write. The complaints are well-founded, but they are too often put as if the problem were merely a technical one and the solution a matter of rapidly inculcating certain basic skills. That is sometimes the case, but we believe that the technical aspect of the problem is not entirely separable from larger questions about the role of fluency in rendering possible those very acts of self-location and of the conceptualization of knowledge that we have just been discussing. Courses in general education are all, whether they mean to be or not, courses in interpretation and expression. We think there is something to be gained by making this more explicit, and we would like to see more courses that address themselves, both practically and reflectively, to what we tend to think of -- too narrowly -- as the question of student writing.

Our recommendations are summarized in Part II; we hope they will be studied as a set of interrelated proposals. Part III takes up each proposal in turn and argues for it at greater length. The proposals and argument in

each case represent the position of a clear majority of the Committee. Each member was then free to write a dissenting statement. We thought that this would contribute more to a general discussion than an attempt to create the impression of unanimity by carefully framing compromise positions.

II. RECOMMENDATIONS -- A SUMMARY

1. A Board on General Education

We propose the creation of a Board on General Education, charged with the responsibility of ensuring that General Education become a meaningful and substantial part of each student's experience in the College. To this end the Board will consult with the departments about their course offerings, sponsor new courses, and oversee the administration of the distribution requirement. The Board should be established for a trial period of 5 years and its work evaluated at the end of that time.

2. New Courses

We propose the creation of new courses, the solicitation and maintenance of which will be the responsibility of the Board on General Education. These courses should be designed primarily for non-specialists. They can be deeper and more challenging than conventional introductory courses, which must attempt to present the elements of an entire subject. The new courses should be as much concerned with the general ability to write and think as they are with substantive content.

3. The Distribution Requirements

In addition to the Freshman Seminars and language requirement, we recommend that a total of 32 hours outside the area of the major be required.

3a. The distribution of 24 of these hours is prescribed. Details of this prescription will vary with the student's major as specified by the accompanying chart. Eight hours are left to the student's choice.

3b. Students are encouraged to spread the courses they take for distribution through their four undergraduate years.

3c. Students are expected to draw up their own schedules and plans for fulfilling the distribution requirements and to present these tentative schedules to their advisors for at least an entire year ahead.

3d. The Board on General Education will recommend certain courses as especially appropriate for distribution. (See 1 and 2 above.) Other courses may also be used for this requirement, but only in the context of an overall plan for distribution approved by the student's advisor and filed with the Board.

4. Writing

We recommend increased stress on instruction in writing throughout the College. This stress should not be confined to the Freshman Seminars, important as they are. We applaud the recent formation of a College Committee on Writing; we hope the Committee will be empowered to monitor instruction, provide additional training, allocate resources, and promote the expansion of opportunities for experience in writing beyond the freshman year.

5. The Freshman Year and Course Credit

So as to prevent too great a dispersion of attention during the freshman year, we propose that, as far as practicable, all introductory courses be granted at least 4 credits. This would have the effect of reducing the typical freshman course load from 5 courses to 4 per semester. For similar reasons, courses sponsored by the Board on General Education ought to be taught as at least 4-credit courses.

6. The Major

We believe that the major must constitute a significant fraction of every student's course of study, as it does now in most cases. At the same time, to ensure the possibility of a broad general education and of some free election of courses,

6a. we propose that no departmental major be permitted to require more than 60 credit hours (including prerequisites and related courses); and

6b. we propose that no student be allowed to count more than 60 hours in a single department toward the 120-hour degree requirement.

7. The Foreign Language Requirement

7a. We propose that students who choose to continue the study of a foreign language they have begun in high school should be required to take two further semesters of that language or the literature of that language at Cornell; those who begin a new language must take at least three. All students must select one or the other of these options, except that the Joint Committee on Language Programs may waive the requirement for students with demonstrated language-learning disabilities. In such cases, the Committee, the student,

and his faculty advisor shall determine an alternative course of study (e.g. in anthropology, foreign literature in translation, linguistics, writing in English) to meet some of the aims of the language requirement.

7b. We propose that the Board on General Education consult with the Joint Committee on Language Programs and with relevant departments to determine how well the aims of general education are being served by existing language courses, and to bring about improvements where they seem necessary.

III. RECOMMENDATIONS AND SUPPORTING ARGUMENTS

1. A Board on General Education

We propose the creation of a Board on General Education, charged with the responsibility of ensuring that General Education become a meaningful and substantial part of each student's experience in the College. To this end, the Board will consult with the departments about their course offerings, sponsor new courses, and oversee the administration of the distribution requirement. The Board should be established for a trial period of 5 years and its work evaluated at the end of that time.

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A program of general education should be based on a substantial number of courses that are accessible to nonspecialists, systematically relate their subject matter to general and fundamental intellectual issues, and stress the development of skills of thought and expression. Few courses of this kind are now offered in the College. The present distribution requirement is usually satisfied with courses that also serve as introductions to particular disciplines. Because such introductions are aimed primarily at prospective majors, they often fail to meet the needs of other students who would benefit from a broader and yet less preliminary perspective.

We believe that the responsibility for creating more adequate general education courses cannot be left with the departments themselves. Such courses are all too likely to be perceived as luxuries that the department cannot afford in difficult times and that it need not establish as long as the distribution requirement continues to channel large numbers of students into its existing offerings. Moreover, the subjects appropriate

to general education often cut across departmental lines, requiring a degree of interdisciplinary cooperation that is not greatly encouraged by the present structure of the College. Finally, general education courses should stress skills of thought and expression, especially writing, to a degree that is far from common at present. Because such an emphasis is not easily reconciled with the task of introducing prospective majors to their field, existing departmental courses tend to require little writing of their students. We feel that the short-answer and multiple-choice test questions on which such courses sometimes rely offer students an unfortunate operational definition of the nature of scholarship.

If the College is to undertake a meaningful program of general education, some autonomous body must be created to stimulate its development. We propose a Board of about ten faculty members, appointed by the Dean in consultation with department chairmen. Members of the Board would be appointed for overlapping three-year terms. Despite the importance we attach to the creation of such a Board, we do not conceive of it as a "Department of General Education." While there will surely be a continuing need to stimulate and emphasize general education in the College, we are reluctant now to prescribe a permanent mechanism for that purpose. It is possible, for example, that the departments themselves will assume more responsibility for general education once such courses have been given and proved

successful. We therefore propose that the structure and function of the entire general education program be evaluated in the fifth year of the Board's existence, without prejudice as to whether it should be continued or replaced by some differently constituted agency.

The Board will consult with the departments about their offerings and will actively solicit new courses from the faculty. Every department should be considered to owe to the College roughly one-fifth of its teaching time for freshman seminars, courses offered by the Board, and other courses serving the purposes of general education. The Board should also have a budget sufficient to hire teaching assistants, engage secretarial help, and offer summer support to individuals engaged in preparing new general education courses.

While we expect that most of the courses sponsored by the Board will be offered within existing departments, this may not always be possible. The Board should have the authority to offer courses under some rubric of its own (as, for example, courses are now offered under the heading "Society for the Humanities"). Such courses, like all others, will need the approval of the Educational Policy Committee.

The Board will also be responsible for the distribution requirement. It will explicitly recommend certain courses in each area as "appropriate for distribution"; this recommendation will be indicated in the catalog. (We feel that the present system, in which the departments themselves determine which of their courses can be used for distribution, is not

satisfactory.) The Board's recommendation will not be limited to the courses that it has itself initiated; existing departmental courses may be recommended after consultation with the professors who offer them. Although students may satisfy the distribution requirement with courses other than those specifically recommended (see Recommendation #3, below), the Board will keep itself informed of the frequency and the pattern with which these exceptions occur.

The administrative functions described above will probably occupy the major share of the Board's time and energy. Nevertheless, we hope that it will also serve as a continuing forum for the discussion of all aspects of the general education program. As a result of such discussions, the Board may propose modifications of the distribution requirement from time to time. If it succeeds in establishing new courses in mathematics that are meaningful and accessible to nonmathematicians, for example, it may wish to propose a specific mathematics requirement. And while the Board is not charged with specific responsibility for the Freshman Seminars, the Writing Program, or the Foreign Language Requirement, it should frequently consult with those who are so charged to determine whether the aims of those programs are being met. In short, it must nourish the strengths and advocate the cause of general education just as vigorously as the departments now support their own more specific professional aims. The task will not be easy, but it is one of critical importance for the College and for our students.

2. New Courses

We propose the creation of new courses, the solicitation and maintenance of which will be the responsibility of the Board on General Education. These courses should be designed primarily for nonspecialists. They can be deeper and more challenging than conventional introductory courses, which must attempt to present the elements of an entire subject. The new courses should be as much concerned with the general ability to write and think as they are with substantive content.

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A number of such courses already exist among the departmental offerings, but not enough. Whether or not such courses can be found in a given area at a given time depends too often on the interest and determination of individual faculty members, fluctuations in staffing, and demands on the time of the departments. Many courses, particularly introductory ones, that might appear suitable to the purposes of general education are designed primarily to meet the needs of majors and prospective majors. We acknowledge that an introductory course in traditional form may be eminently suitable as a general education course for some students. For example, an English major may find that a rigorous introductory course in physics is the most appropriate choice. However, the interests of other English majors might best be served by a different kind of course. Students should be provided with a greater choice of offerings outside the major.

The courses envisioned here would not be "elementary" or "diluted" presentations of a particular field. They would be free from the constraints of preparing students to move through a series of increasingly specialized

departmental offerings. We can imagine such courses at different levels of sophistication to be taken at different points in a student's career. They can be designed in any number of ways, some directed at the basic principles of a subject, others more narrowly focused. We give examples of what we have in mind in an Appendix; we suspect that many of our colleagues, given time and support, would be eager to work up offerings of this sort.

3. The Distribution Requirements

In addition to the Freshman Seminars and language requirement, we recommend that a total of 32 hours outside the area of the major be required.

3a. The distribution of 24 of these hours is prescribed. Details of this prescription will vary with the student's major as specified by the accompanying chart. Eight hours are left to the student's choice.

3b. Students are encouraged to spread the courses they take for distribution through their four undergraduate years.

3c. Students are expected to draw up their own schedules and plans for fulfilling the distribution requirements and to present these tentative schedules to their advisors for at least an entire year ahead.

3d. The Board on General Education will recommend certain courses as especially appropriate for distribution. (See 1 and 2 above.) Other courses may also be used for this requirement, but only in the context of an overall plan for distribution approved by the student's advisor and filed with the Board.

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These changes are proposed because current practice in the College tends to turn the distribution requirement into an obstacle to be surmounted

in the shortest possible time. Furthermore, students often satisfy their distribution requirements with courses that are close to their major subjects, thus nullifying the intent of the requirement. The Committee hopes that its suggested reform will alter this pattern. The purposes of general education will be better served by making the requirement complementary to the major and by encouraging students to explore new areas throughout their undergraduate careers.

For the most part, the distribution requirement we propose follows traditional lines. We believe that everyone should acquire some familiarity with the natural sciences, the social sciences, and the humanities. We do not advocate a "core curriculum" in these areas, preferring to let each student choose a wide range of appropriate courses.

The chart shows how the 32 hours outside the major may be selected from various fields. The range of choices available to students depends on their major field. We have divided the major fields in the College into seven groups which are listed down the left side of the table. We have also listed across the top of the table eight categories of courses that might be taken for the distribution requirement. The distribution requirement for each major field is then found by reading across the table, noting (1) that 24 of the 32 hours are to lie in certain specified categories, (2) that X indicates categories that will not satisfy the distribution requirement for the given major, and (3) that the remaining 8 of the 32 hours may be in any category or categories not prohibited by an X.

Gradus ad Parnassum

AREA OF DISTRIBUTION / MAJOR FIELD	Physical Science	Biological Science	History or Philosophy of Science	Mathematics	Anthropology, Linguistics, Psychology, Sociology	Government, Economics	Classics, History, Literature, Philosophy	Performing Arts
Physical Science	X	8		X	8		8	
Biological Science	X		8					
Mathematics	8			X				
Anthropology, Linguistics, Psychology, Sociology	16 hours, no more than eight of which are to lie in any one of the three subdivisions.				X		8	
Government, Economics						X		
Classics, History, Literature, Philosophy					8		X	
Performing Arts								X

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The chart only specifies how 24 of the 32 hours are to be distributed. The remaining 8 hours may be in any area except those explicitly prohibited by an X.

18.

For example, a student majoring in chemistry (which falls within the physical sciences) can satisfy the distribution requirement by taking a total of 8 hours of courses in the biological sciences, the history of sciences, or the philosophy of science; 8 hours in anthropology, linguistics, psychology, sociology, government, or economics; 8 hours in classics, history, literature, philosophy, or performing arts; and 8 further hours distributed among any of these fields. A chemistry major may not, however, satisfy the distribution requirement with courses in any physical science or in mathematics. For a major in history the distribution requirement would be a total of 16 hours in the physical or biological sciences, the history or philosophy of science, or mathematics (divided among these three areas so that either 8 hours are taken in each of two of the three areas, or 8 hours are taken in one and 4 in each of the other two); 8 hours in anthropology, linguistics, psychology, sociology, government, or economics; and 8 further hours distributed among any of these fields or the performing arts. A history major may not satisfy the distribution requirement by courses in history, classics, literature, or philosophy (though such courses might satisfy departmental requirement for "related hours").

The presence of history and philosophy of science as a separate area requires explanation. The Committee believes that these subjects constitute an interface between the sciences and the liberal arts. Science is both a strategy in the pursuit of knowledge and an institution influenced

by drives, passions, intellectual fashions, and other aspects of human life. The history and philosophy of science can help the scientifically oriented student appreciate the nature of science as an institution and may enable students of the humanities to understand science as a method of investigation.

We also believe that some acquaintance with mathematical thinking is an essential part of a student's education. Existing introductory mathematics courses are not entirely suitable for this purpose. We therefore urge the Board to provide a number of general education courses in mathematics. If such courses can be successfully established, we recommend that mathematics be made a requirement rather than an option.

It is not enough simply to write new requirements. If these are to lead to a meaningful general education, students must begin to think about their whole undergraduate experience as soon as they arrive at Cornell. The Committee therefore recommends that students submit tentative plans to their advisors in which the requirements for the major and for the distributions are spelled out explicitly. Advisors may wish to play an active role here by indicating patterns of courses that will serve to integrate knowledge drawn from different fields, or by suggesting other ways in which the student may draw maximum benefit from the requirements.

4. Writing

We recommend increased stress on instruction in writing throughout the College. This stress should not be confined to the Freshman Seminars, important as they are. We applaud the recent formation of a College Committee on Writing; we hope the Committee will be empowered to monitor instruction, provide additional training, allocate resources, and promote the expansion of opportunities for experience in writing beyond the freshman year.

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No one is liberally educated who cannot write clearly. The increased emphasis on writing in the Freshman Seminar Program is noteworthy, but much remains to be done. There are few courses in writing available to students who are not freshmen. We do not believe that stress on writing should be confined to the student's first year; more writing courses need to be offered to satisfy the demand of freshmen and others. It is the College's responsibility to provide those courses and to call upon the various departments to staff them. In particular, general education courses should require a great deal of writing.

At present the various departments initiate and staff the courses in the Freshman Seminar Program. The offerings do not correspond with student demands; more students want to take composition courses than can be accommodated in the sections available. The Writing Committee should decide how many sections of a given course should be offered and assign to the more general composition courses those teaching assistants not needed in seminars dealing with a specific topic.

We hope the College will also offer opportunities for students to take writing courses in connection with various disciplines, and will promote and reward the expansion of writing experiences in each and every appropriate course. The Writing Committee should oversee instruction in writing and recommend changes in the writing curriculum when they appear necessary.

The Committee should also decide the optimum size of a Freshman Seminar or other writing class. We believe that people devoting substantial time to courses about writing should be compensated for the extra effort involved. Teaching Assistants invited to participate in writing seminars should be given increased stipends. Faculty members invited to participate could perhaps receive extra credit towards seventh-term leaves. We recognize that instruction in writing is an expensive form of education, but we consider it a central concern of general education and are prepared to see cuts made elsewhere in order to improve in this area.

5. The Freshman Year and Course Credit

So as to prevent too great a dispersion of attention during the freshman year, we propose that, as far as practicable, all introductory courses be granted at least 4 credits. This would have the effect of reducing the typical freshman course load from 5 courses to 4 per semester. For similar reasons, courses sponsored by the Board on General Education ought to carry at least 4 credits.

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The revisions of the curriculum proposed in this report would do away with the notion of general education as something students are "given" during their first years, before they are asked to turn their attention to

particular fields of concentration. Nevertheless, we would emphasize the importance of the freshman year, both as the time when students discover the variety of disciplines clustered together in the university and as the first and best moment for them to test and consolidate their skills as readers and writers of English. These two uses of the freshman year are not easily adjusted to one another, however: one seems to call for offering our freshmen as large a sampling of courses as possible; the other -- if it is to provide anything more than perfunctory training in the skillful use of language -- must be conducted in an atmosphere of intense leisure. Something has to give, and we would be in favor of sacrificing variety to intensity. Freshmen should not be asked to divide their energies among more than four courses. In the last year or two, Arts College advisors have been operating on just this assumption; by changing the weighting of freshman courses from 3 to 4 credits we would simply institute this policy more firmly.

We also believe that for a number of freshmen, including some of the most energetic and talented, a three-course semester would be particularly rewarding. We therefore recommend that departments consider launching a certain number of intensive introductory courses that meet more frequently and require more written work, while continuing to offer courses in their present weighting as well. These new, more demanding courses (carrying as many as 8 credit hours) might be developed in any format, large or small, but they would seem

especially appropriate for the Freshman Seminar Program, which we would like to see continued and invigorated. It is here that the work of learning to read and write with some care and accuracy can best be done; it is here, too, that courses should be developed that would coordinate readings in the social sciences, humanities, and sciences, and that would introduce students to the notion of a discipline and to the differentiation of fields.

Looking into the question of course credit for freshmen, the Committee discovered that the assignment of credit for courses at all levels of instruction was in need of rationalization. At present, many introductory courses counted for three credits actually demand considerably more of their students than the credit indicates; on the other hand, some upper-level, 4-credit courses ask less of their students than they should. The Committee cannot address itself here to these discrepancies, nor can it take up the intricacies of credit-exchange among the several colleges. We would urge, however, that such rationalization be carried out and, for a start, we would instruct the Board on General Education to consider the courses it sponsors as worth 4 credits or more.

6. The Major

We believe that the major must constitute a significant fraction of every student's course of study, as it does now in most cases. At the same time, to ensure the possibility of a broad general education and of some free election of courses,

6a. we propose that no departmental major be permitted to require more than 60 credit hours (including prerequisites and related courses); and

6b. we propose that no student be allowed to count more than 60 hours in a single department toward the 120-hour degree requirement.

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The undergraduate major serves to prepare a student for graduate study in the same field, or in a professional field such as law or medicine. In the latter case it may be to the student's advantage to major in a subject not too closely related to an eventual career; such is indeed the advice given by many of the best law schools and medical schools. More rarely, an undergraduate major may prepare a student to begin a career directly upon graduation, for instance in chemistry, computer sciences, economics, or secondary-school teaching in any of several fields.

In its own unreplaceable way, the major also serves the purposes of general education, giving focus and discipline to undergraduate studies. A good general education necessarily entails some detailed understanding of one branch of learning; the major meets that need by allowing for sustained study, over at least three years of a student's college career, of one academic subject, with its particular factual content and style of inquiry.

It follows that the major, along with its prerequisites and required courses in related fields, should ordinarily occupy at least one third of a student's time in college, and should be carefully designed to ensure the acquisition of sufficient knowledge and adequate skills. (For practical

purposes, "sufficient" and "adequate" might be defined as what would be expected of a well-prepared entering graduate student or a beginning high school teacher.)

At the same time, departments should not define their majors in such a way as to place unreasonable constraints on students. In some fields, Cornell seems at the moment to be overpreparing its undergraduates: they leave for graduate school with advanced training in all aspects of their general subject, and need only to engage in narrowly specialized research to complete the requirements for an advanced degree. Such a practice encourages educational irresponsibility in the graduate schools and unbalances students' undergraduate education. We therefore propose that no major be allowed to require more than half a student's time in college, at the very most. If we assume only 120 hours in all, a student taking a sixty-hour major, and satisfying the requirements for Freshman Seminars, foreign language, and distribution, would ordinarily have 12 hours for free electives. (It should be remembered that the eight courses -- 32 hours -- required for distribution are in fact electives, although six of them must fall into prescribed areas of study.) A student taking a more typical 40-hour major would be free to choose 32 of the 120 hours in electives, while satisfying all requirements. Most students, of course, take more than 120 hours in college: the normal program of four courses per semester would add up to 128, if (as proposed in Section 5) most courses were assigned four hours' credit.

We have also discussed the case of those students who, already as undergraduates, give evidence of exceptional capabilities for and a kind of singleminded dedication to one subject. It seems that such dedication and concentration should be encouraged, but not at the expense of the student's general education. We therefore propose that no student be allowed to count more than 60 hours in any single department towards the 120 hours required for graduation. The effect would be to allow exceptional students to concentrate as heavily as they liked by taking courses in their major subject above and beyond the required 120 hours.

7. The Foreign Language Requirement

7a. We propose that students who choose to continue the study of a foreign language they have begun in high school should be required to take two further semesters of that language or the literature of that language at Cornell; those who begin a new language must take at least three. All students must select one or the other of these options, except that the Joint Committee on Language Programs may waive the requirement for students with demonstrated language-learning disabilities. In such cases, the Committee, the student, and his faculty advisor shall determine an alternative course of study (e.g. in anthropology, foreign literature in translation, linguistics, writing in English) to meet some of the aims of the language requirement.

7b. We propose that the Board on General Education consult with the Joint Committee on Language Programs and with relevant departments to determine how well the aims of general education are being served by existing language courses and to bring about improvements where they seem necessary.

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A majority of the Committee agrees that the study of foreign languages is an important part of a university education, serves broad educational purposes, and should be required. The Committee's discussions have

shown that the questions raised by a language requirement are relatively unfamiliar to many teachers and students; we have therefore chosen to set forth our reasoning more fully in this section than in some other parts of the Report.

The value of foreign language study: The study of foreign languages has traditionally been considered an important element of liberal education. It gives access to the texts in which the spirit of other cultures is set forth (texts which are often essentially untranslatable, as in the case of poetry) and to fundamental works of scholarship. It gives access also to the basic human experience of being a foreigner, of discovering the relative, contingent nature of one's own native language and the mental habit embodied in it -- an experience difficult to describe effectively to someone who has never had it, and one which is denied to many Americans by the linguistic isolation of their environment. Indeed, the "national interest" alone would seem to require that larger numbers of educated Americans be able to express themselves effectively in languages other than English.

Practical language teaching must seek to implant as quickly as possible those unconscious speech habits necessary for communication with speakers of the foreign language, and to develop efficiently the skills allowing access to written materials; it goes without saying that no single language course can teach all the fundamentals of linguistics. Still, even students who take only enough language courses to satisfy the requirement

should feel that they have made some headway toward an understanding of language in general. Elementary and intermediate language courses can be designed and taught in such a way as to introduce students, by example and the use of a little theory, to such ideas as: the relative and arbitrary nature of signs and languages; the difference between the child's "natural" acquisition of its first language and the conscious learning process of the adult; bilingualism; the complex relations between speech and writing; the formal structures of language (the best teaching often emphasizes contrasts between the "mother tongue" and the "foreign" language); the nature of translation; the existence of different "styles," or "levels" of discourse, within any one language; and so on. An introductory course in a foreign literature, or a course in civilization taught in the foreign language, can teach many of those same notions.

Effects of the abolition of language requirements: The teaching of foreign languages in the U.S. is not in a happy phase. A fair number of private universities and colleges have dropped their language requirements for admission in recent years (whereas the better state universities, unworried about admissions, have tended to maintain theirs). Sometimes language requirements for graduation have been eliminated on the grounds that it is unnecessary and undignified to coerce "superior" students, who, it is said, will study languages of their own accord; but at Yale, for example, where such was the reasoning, significantly fewer undergraduates are now taking languages. High schools have not been slow to read the

message: among the first programs to be cut or neglected in the lean years, along with art and music, have been foreign languages. Many students now entering Cornell with CEEB scores in the 700's cannot understand a lecture delivered in the language they have studied, nor, given the use of a dictionary, make sense of a page of literary prose, nor make themselves understood in speech or writing on general subjects.

Teaching of the "formal grammar" of English has been all but abandoned in primary and secondary schools. Students often report that college courses in foreign languages have provided their first effective contact with such basic notions as "the parts of speech," and indeed with the very practice of formal analysis of language. Instruction in foreign languages assumes a new and important responsibility in the much popularized "war on illiteracy."

The aims of our proposal: If a language requirement is to make sense, there must be general understanding of the purposes it serves, and a variety of good courses by which it may be satisfied. There are many good language courses at Cornell, and some admirable ones. We applaud the proposed creation of four-credit-hour elementary courses as an alternative to the established and successful intensive six-hour courses. As a recent survey conducted by the Dean's office shows, most students studying languages here are happy to be doing so. Those few students most energetic in calling for the abolition of the language requirement usually turn out to have been maimed by poor high school

language teaching which served no intellectual purposes at all. Naturally enough, they have no idea why anyone should think the study of languages educational. It is our belief that -- especially given the number of departments engaged in language teaching, and the great disparities of style -- we all stand to gain from a general review of language instruction and from serious public discussion of the place of foreign languages in the scheme of general education.

We believe that the College should continue to require knowledge of foreign languages for admission, making exceptions as applicants' special circumstances may dictate. The present language requirement for graduation is the result of successive concessions and erosions; we find it inadequate. Some Arts College students do not study languages in college at all, and many only for one semester. We do not feel that the requirement should be stated by reference to CEEB scores or any other system of "objective" testing which discriminates against some students on the basis of educational or cultural background. We have attempted to write the requirement in such a way as merely to ensure that all students have at least some reasonable exposure to the experience of language study. Some instructors express distaste for the idea of teaching captive students. That understandable feeling does not seem to us to argue persuasively against a language requirement; given a term or better a year, a teacher should be able to convince students that his subject is enjoyable and worthwhile.

We recommend that advisors encourage all students to begin language study early in their college careers, and that in part for practical reasons: if undergraduates read a foreign language reasonably well by the end of their sophomore year, they can then use it actively for half their time in college, and the "requirement" is converted into a self-explanatory opportunity for learning. Finally, as to those students whose native language is not English: the current College catalogue states that they may fulfill the language requirement and receive six hours' credit by demonstrating proficiency "in their native language" (and not in English, which for them is the learned language). We find this anomalous and would recommend that the Joint Committee on Language Programs and the Board on General Education consult on the issue as soon as possible.

APPENDIX A

NEW COURSES

There already exist in the College some courses that serve well the purposes of general education, such as the course in physics on space exploration and in biology on biological discovery. We give in this Appendix some examples of possible new courses -- three or four each in the physical sciences and math, in the humanities and the social sciences -- which may serve as additional examples of what we have in mind.

THE EVOLUTION OF MODERN SCIENCE

A year-long course designed to trace, in some detail, the development of scientific ideas and techniques concerning the basic elements and processes of inorganic and organic nature from about 1800 to the present. Some topics studied will be: (1) The development of instruments and the fundamentally important role played by simple observations and measurements, (2) The conflict of philosophies and the function of a particular cast of thought in focussing attention on certain aspects of reality at the expense of others, (3) The growth and interaction of scientific ideas, in particular concepts such as that of the atom and the nature of matter, of forces and fields, of thermodynamics, of the nature of living matter, the evolution of life, the nature of disease, etc. The course will stress the interplay of ideas, experiments, false systems, and speculative visions in the evolution of creative science.

THERMODYNAMICS

Thermodynamics is the study of heat and work and the conversion of energy from one of these forms to the other. It is a science that is quite abstract, yet of such fundamental and practical importance that an understanding is essential to the physicist, chemist, engineer, biologist, and geologist -- thermodynamics is a cornerstone for all science.

This course will emphasize the development of concepts such as temperature, energy, work, and order-disorder (entropy) with an attention to historical perspectives. These thermodynamic concepts will be examined in contexts ranging from relatively fast biological processes to the slow but inexorable geological processes to the pragmatic elements of energy management in our present and future society.

ASPECTS OF MATHEMATICS

The aims of this course are to exhibit some examples of mathematical reasoning, to show some applications, and to present mathematics as the study of structure. Typical topics might be orders of magnitude, dimensional reasoning, elementary statistics, the idea of a mathematical model, perspective and projective geometry, Enler's theorem on polyhedra, the axiomatic method (Euclid and Hilbert), and symmetry.

THE USES OF NUMBERS

The two aims of this course would be to develop the habit of noting the implications of the many (economic, political, geographical, etc.) numerical assertions one encounters every day, and to develop a sensitivity to the pleasures that mathematics can afford. Possible topics include: the art of estimating; how to use (or misuse) probability and statistics; mathematics as an empirical science (e.g. guessing theorems with the aid of a pocket calculator); what computers can and cannot do; mathematics as an art-form (number theory); the history of π and e; what the calculus is about; the classification of infinities.

TIME

Time is something everyone has definite (though often unexpressed) ideas about. However, a few quite simple facts from the world of phenomena reveal that the nature of time is in many ways quite different from the common naive notions. Since the naive view of time is built into language itself (through, for example, the use of tenses or of words and phrases which only have meaning given certain implicit temporal assumptions), it is not at all easy to rise above the naive view, and the experience of trying to do so can be illuminating. The nature of time will be approached from the following points of view: clocks, in principle and in practice; time in the theory of relativity; the direction of time, according to thermodynamics and statistics; contrasts and connections between the views of time in physics, philosophy, psychology, and literature.

SCIENCE FICTION

The aim of the course is to attract to the study and discussion of literature some of those students (numerous in technical and scientific fields, and in the social sciences) who read no works of imagination other than science fiction. Many of those students turn out to have developed in high school a hatred of "the classics" and a conviction that the analysis of literature is inhuman and boring. Nevertheless they read staggering quantities of science fiction, usually in "escape" from their studies, and

feel guilty about that reading; they are anxious to defend SF against attacks coming from the "centers of high culture," but are themselves quick to say that SF has "little or no literary value." Class discussions aiming to set science fiction into the same historical and literary perspectives as "the classics," to encourage slow, analytical reading and the disciplined expression of personal responses are a new experience for such students, and a valuable one. If such a course were taught jointly by a student of literature and a historian of science, it could consider the relations of science to society and myth. But even just as a course in reading, writing, and discussing, it would fill an important place. (This course was in fact offered in Spring 1976 and had an enrollment of nearly 80 students, most of whom had never taken a lit course in college.)

TECHNICAL LANGUAGE, NEOLOGISM AND JARGON IN THE HUMANITIES AND SCIENCES

Under what conditions does expository writing turn "technical"? What is gained (in precision, in explanatory power) by departing from "ordinary language"? What is ordinary language? These are some of the questions that might be taken up in a course taught jointly by a philosopher, a scientist (social or asocial), and a literary critic. Some time might be spent on a philosopher notorious for his special vocabulary (e.g. Kant or Peirce); another unit might contrast the sociological writing of someone like Talcott Parsons with those of a more anecdotal sociologist like Goffman. The aim of the course would be to draw students' attention to the ways in which writing is something other than the transparent, more-or-less competently handled medium for "thought" or "argument." Readings would be limited; a good deal of writing (in a variety of styles) would be required.

THE HUMANITIES AND THE TRADITION OF CONTROVERSY

Selected readings in the history of the debate, from 1800 to the present, over the place of the humanities and the sciences in the English and American university. A careful study of what the arguments tell us about the authors' views of themselves, their culture, and their beliefs. From Mill and Newman to Dewey and Hutchins.

MARX AND THE MANAGERS

A course by an institutional economist or by an economist and a political scientist on the political significance of changes in the 20th Century industrial economy. What is "post" about the post-industrial society? Stress would be not on macroeconomic phenomena but on social, political, and industrial organization within the modern economy.

Depending upon the interests of the instructors, the course could be conducted entirely on the United States or on a comparative basis.

THE CONCEPT OF INTELLIGENCE

This course might cover intelligence from the viewpoint of both differential psychology (tests) and developmental psychology (especially Piegetian theory), together with a review of the history and politics of the heredity question. Other possible topics would include the intelligent behavior of animals on the one hand and the "artificially intelligent" behavior of computers on the other.

ANTHROPOLOGY, A BIOLOGICAL, PHYSICAL, AND SOCIAL VIEW: HEREDITY, EVOLUTION, AND SOCIETY

An understanding of the hereditary, evolutionary and societal influences on our lives is an essential element in a "coming of age." This course is an introduction to these influences. An elementary discussion of genetics serves as a departure point for a biological, physical, and societal characterization of man and his environment -- this organization is based on the premise that the most important facts are those with social implications. However, the incredibly plastic interplay of heredity and environment allows not a perspective, only a set of perspectives. Accordingly, the objective of this course is the development of a scientific and humane base for the beginning of an understanding of our society.

APPENDIX B

SAMPLE COURSE PROGRAMS UNDER THE REVISED RULES

We have sketched out a few examples of the kind of four-year program we have in mind, showing, incidentally, that the requirements we propose are compatible with the demands of the students' majors.

PHYSICS

Freshman Year

Freshman Seminar	Freshman Seminar
Math 111	Math 122
Russian 131	Physics 112
Anthro. 201 (Social Anthropology)	Russian 132

Sophomore Year

Math 221	Math 222
Physics 213	Physics 214
History of Cinema I	History of Cinema II
History 393 (History of China to Modern Times)	Sociology 253 (Sociology of Sports)

Junior Year

Math 421	Math 422
Physics 325	Physics 318
Comp. Lit. 343 (Medieval Lit.)	Physics 326
*Evolution of Modern Science	*Evolution of Modern Science

Senior Year

Math 423	History 254 (Russian History since 1860)
Physics 301	
Physics 443	Physics 410
*Marx and the Managers	Physics 454
	*Communication & Politics

* new course

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ENGLISH

Freshman Year

English 139 (double-strength Fr. Seminar)	English 140
Russian 133	Russian 134
Biology 105	Biology 106

Sophomore Year

English 270 (Reading of Fiction)	English 271 (Reading of Poetry)
Russian 201	Russian 202
History 350 (Early Renaissance)	History 351 (Late Renaissance)
Anthropology 101	History 288 (History of Biology)

Junior Year

English 330 (18th Century)	English 327 (Shakespeare)
English 363 (Amer. Realism)	English 345 (Victorian)
Russian 335 (Gogol)	Russian 369 (Dostoevsky)
*Aspects of Math	*Math (continuation)

Senior Year

English 470 (Novel)	English 407 (Biography)
Russian 432 (Pushkin)	English 403 (Irony)
Anthropology (Social Anthro.)	Anthropology (Arts and Culture)
History 353 (Intellectual)	History 354 (Intellectual)

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GOVERNMENT

Freshman Year

Freshman Seminar	Freshman Seminar
French 133	French 134
Govt. 111 (Intro. to Amer. Govt.)	Govt. 161 (Intro. to Pol. Theory)
Sociology 107 (Conflict & Cooperation)	Music 219 (Chopin, Chaikovski, Musorgsky)

GOVERNMENT (cont'd.)

Sophomore Year

Chemistry 103 (or 207)
Economics 101
Govt. 131 (Intro. to Int'l. Studies)
Govt. 327 (Civil Liberties)

*Chemistry - Thermodynamics
Economics 102
Govt. 318, 323, or 316 (a course in Amer. institutions)
*The Uses of Numbers

Junior Year

History 161 (Intro. to Westn. Civ.)
Govt. 300 (Major seminar, preferably in comparative field)
Economics 311 (Intermed. micro and macroeconomic theory)
Govt. 363 or 361 (Classics in Pol. Thougnt or Liberalism)

History 152
*Aspects of Math
Economics 312
Govt. 313 (Nature, Function, Limits of Law)

Senior Year

Music 213 (The Art of Music)
History 354 (European Intellectual History in 19th & 20th Century)
English 363 (The Age of Realism & Naturalism)
Govt. 427 (Constitutional Pol.)

Sociology 224 (Folklore)
Govt. 385 (Contemporary American Foreign Policy)
History of Art 240 (Intro. Art History)
History 355

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FRENCH LITERATURE

Freshman Year

Freshman Seminar (Man's Place in Nature)
Math 111 (Calculus)
French 201 (Intro. to French Lit.)
Biology 105

Freshman Seminar (History of Western Civilization)
*Aspects of Mathematics
Biology 106
French 202

FRENCH LITERATURE (cont'd.)

Sophomore Year

French 203 (Composition)
History 287 (History of Biology)
French 361 (17th Century Tragedy)
Linguistics 101

French 204 (Composition)
Anthropology 204 (Human Biology)
French 452 (La Fontaine)
Romance Studies 382 (Problems of Interpretation in the Human Sciences)

Junior Year

French 311 (Composition)
French 375 (18th Century Novel)
History of Art 357 (18th Century Europe)
French 408 (Linguistic Structure of French)

French 312 (Composition)
French 376 (Voltaire, Diderot, Rousseau)
History 355 (17th & 18th Century France)
* Anthropology, a Biological, Physical, and Social View

Senior Year

French 355 (Rabelais)
History 351 (Late Renaissance)
* Renaissance Science
* Historiography

French 358 (Renaissance Poets)
French 30? (The Historiography of French Lit.)
English 426 (Poetry and Music in the Renaissance)
Music 482 (Josquin to Monteverdi)

APPENDIX C

DISSENTS

The College presently requires the demonstration of certain levels of competence in foreign language, as demonstrated by test scores of their equivalents. The majority of this Committee has recommended instead that a certain number of courses in a foreign language be required, regardless of the level of competence achieved before (or after) these courses are undertaken. The undersigned members feel that both of these alternatives should be rejected, and the foreign language requirement should simply be abolished.

In making this suggestion we do not deny that the study of a foreign language may confer important benefits or lead to valuable insights about language and culture. There is no longer any reason to believe, however, that these gains are greater than those offered by many other courses of study. Arguments just as eloquent as those advanced in support of foreign language study could be put forward on behalf of history, or psychology, or biology, or of many other disciplines that we do not explicitly require. And while it is true that foreign language instruction enriches many students, enabling them to read otherwise inaccessible literature and understand otherwise incomprehensible speech, it is also true that it patently fails to do so for many others. They might well prefer to acquire other skills, and the choice should be their own.

At one time, all educated persons had to know Latin and Greek. The requirement was sensible, manageable, and appealing: sensible because many works that they wished to read were written in these languages, manageable because there were relatively few other subjects with an equally valid call on their time, and appealing because such knowledge marked them off from the uneducated masses in an obvious way. It is no longer sensible or manageable, and its appeal has faded in a more democratic society. Consequently, it has been abandoned. The time has come to abandon the general foreign language requirement for similar reasons. There is now a great deal of literature available to those who read only English, and there are many more areas of knowledge competing for the energies of our students. The special emphasis on foreign-language study that was once entirely appropriate is no longer justified.

It is not our intention to diminish the college's commitment to general education in any way, but rather to strengthen it. Because many existing language courses do have a general education component, we recommend

that the abolition of the foreign language requirement be accompanied by an increase in the number of credit hours required for distribution from 32 to 36 (with the area of the additional four hours to be elected by the student). Courses in foreign language and literature, like other courses in the College, could be recommended for distribution by the Board or accepted for this purpose by the student's adviser.

Ulric Neisser
Wolfgang Fuchs

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I am forced to disagree with the Committee's handling of the foreign-language requirement.

I agree that there should be such a requirement, but not for the reasons stressed in the Report. The pervasive monolinguality of our tourists, diplomats, and traveling businessmen and scientists is a national disgrace. We need sizable and growing stocks of educated citizens who can communicate effectively in languages other than English. While no one institution can do much towards that goal, I think it is the moral responsibility of our College to use whatever clout it has. This is as true now as it was three decades ago; and now, as then, we should lead, not follow.

I agree that over the years our foreign-language requirement has been progressively eroded, so that currently it means little; and that therefore it should be strengthened -- as should, also, our entrance requirement in foreign language.

I agree that the current Catalog wording of the way the requirement applies to foreign students is absurd. An earlier formulation spoke appropriately in terms of languages foreign to the student, instead of languages foreign to us; the earlier formulation should be restored.

Otherwise, I feel that an implementation of the Committee's recommendations would constitute, not a strengthening of the requirement, but a further weakening.

The central feature of the recommendations is to replace our long-standing achievement standard for the language requirement by an endurance standard. That would be a shameful turning-back of the clock. We set such highschoolish notions behind us in 1946, when we agreed that the educational benefit of foreign-language skills inheres not in the manner in which they are acquired but in having and using them. If our achievement standard has dropped too low, it should be raised, not abandoned.

The arguments presented in the Report in support of the proposed change are faulty in that they confuse practical language-learning with linguistics and with literary study:

(1) Learning how language works as a human institution, or how a particular foreign language differs from English, is a fine educational enterprise in its own right, but not one that is comfortably combined with practical foreign-language learning. Experience has repeatedly shown that, beyond a very small useful minimum, time spent learning <u>about</u> a language is time wasted from gaining skills <u>in</u> the language.

(2) Similarly, although studying a foreign literature in the original is an eminently worthy undertaking, introducing this into a language-learning program prematurely is doubly deleterious. As a language-teaching technique it tends to be extremely inefficient. And since the student does not control the language well enough to handle the literary material with ease, studying it is apt to be a bore instead of a pleasure.

I think the main reason we all have so much trouble dealing realistically with foreign-language study in the curriculum is that we are unable, or unwilling, to acknowledge how different language-learning is from any of the other sorts of learning that concern us.

In any other subject, facts which at first may seem diverse often turn out to be significantly interrelated; indeed, the search for the connections is often the chief intellectual challenge. This is especially the case for mathematics, where a whole vast system can grow, given the principles of logical inference, from a tiny set of postulates. A language is nothing like that. To be sure, there are sets of interconnected facts in any language. But the outstanding property of a language is the sheer bulk of the items that can only be learned individually. You can't know that the English word for wheat is <u>wheat</u> unless you have mastered <u>just that fact</u> -- you could know everything else there is to know about the whole language and still not be able to infer it. Every language contains tens of thousands of such uniquenesses.

Consequently, there simply is no fast way to master a language. Materials can be organized progressively and presented efficiently, but with the best imaginable guidance the learner still has to slug it out in seemingly endless sessions of intensive drill. Therefore the introduction into our curriculum of alternative beginning language courses meeting fewer hours per week than the traditional seven is not to be welcomed, as the Report does, but to be deplored.

Now, it may be that a genuine foreign-language requirement, formulated in terms of achieved levels of control of practical skills, and shorn of high-sounding but irrelevant linguistic and literary considerations, cannot be claimed to make any important contribution to General Education. But if that is correct, then our General Education Committee should not say anything at all about the foreign-language requirement, but leave the continued discussion of that issue to other agencies.

Charles F. Hockett